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# PSYCHIATRIC SYMPTOMS PRECEDING ADDICTIVE DISORDERS

#### **Abstract**

**Brief introduction.** Aim of this study was to investigate a possible temporal and causal connection between psychiatric disorders and addictive behaviour with the goal to prepare the ground for studies on the best prevention strategies.

Materials and methods. We evaluated a sample of 105 patients with a diagnosis of addiction disorder, treated in mental health care centers in Siena. Patients included had to be 18 years old, have good mastery of Italian language, be able to give informed consent and free of significant cognitive deficits. Each patient was administered a demographic form followed by a SCID I (Structured Clinical Interview for DSM-IV Axis I Disorders) and a SCID II (Structured Clinical Interview for DSM-IV Axis II Disorders) both extended with a section containing information about the age of onset of each item.

**Results.** Over 90% of the sample had comorbidity on Axis I or Axis II, with a clear majority of mood and anxiety disorders (Axis I, DSM IV) and of Cluster B disorders (Axis II DSM V) respectively. The age of onset of mood disorders was, on average, 3 to 6 years before the outbreak of drug abuse in more than 20% of the sample, whereas more than 50% of our sample endorsed an anxiety disorder that preceded the onset of drug addiction. Comorbidity with Axis II disorders was highly represented (Tab. I): 85% of the sample presented a personality disorder and over 50% had multiple diagnosis. All subjects with a diagnosis of personality disorder showed the first symptoms approximately 2 years before the beginning of the addictive behaviour.

**Conclusions.** This study suggests that addiction diseases are very often preceded by other psychiatric disorders and that preventive actions are possible during the time window between early psychiatric symptoms and the first contact with substances of abuse. In particular, early detection and efficient treatment of the psychiatric disorder most strongly associated with drug abuse might prevent the outbreak of a full-blown substance-related disorder. Prospective studies are necessary to confirm the direction of causality and evaluate if the two phenomena are directly correlated with a cause-effect relationship.

Key words: addiction disorder, comorbidity, anxiety disorders, cluster B

#### Introduction

The term "Dual Diagnosis" describes the simultaneous presence, in the same patient, of a mental and an addictive disorder <sup>1</sup>.

Several studies show how psychiatric symptoms could be responsible for the start of drug abuse, often with the aim of self-medication <sup>2-5</sup>. It's possible to assume that an early detection of psychiatric symptoms or personality characteristics (even without a full-blown diagnosis) could be a target for prevenction strategies to mitigate risk and avert substance-related problems later in life <sup>6</sup>.

Aim of this study was to investigate a possible temporal and causal connection between psychiatric disorders and addictive behaviour with the goal to prepare the ground for studies on the best prevention strategies.

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#### Materials and methods

We evaluated a sample of 105 patients with a diagnosis of addiction disorder, treated in mental health care centers in Siena. Interviewers described the project to participants and informed them that they should have received no compensation. Patients included had to be 18 years old, have good mastery of Italian language, be able to give informed consent and free of significant cognitive deficits. Each patient was administered a demographic form with informations about the age of access to mental health care center, family history of mental disorders, past therapy and actual therapy and present history of drug abuse. Demographic form was followed by a SCID I (Structured Clinical Interview for DSM-IV Axis I Disorders) and a SCID II (Structured Clinical Interview for DSM-IV Axis II Disorders) both extended with a section containing information about the age of onset of each item. Finally our data were incorporated into a database by a software (Excel 2007) and statistically elaborated by SPSS Statistic Base, version 10.

### **Results**

Our results are summarized in Table I. Over 90% of the sample had comorbidity on Axis I or Axis II, with a clear majority of mood and anxiety disorders (Axis I, DSM IV) and of Cluster B disorders (Axis II, DSM IV) respectively. In particular, the age of onset of Mood Disorders was, on average, 3 to 6 years before the outbreak of drug abuse in more than 20% of the sample, with a predominance of Mayor Depression. More than 50% of our sample endorsed an Anxiety Disorder that preceded the onset of drug addiction, with peaks as high as 25% concerning Social Phobia (with an outbreak of 9 years before drug abuse) and as high as 20% of the sample concerning Generalized Anxiety Disorder (with on outbreak of 7 years before drug abuse). In 40% of the patients with a diagnosis of Post-Traumatic Stress Disorder (PTSD) the onset of psychiatric symptoms predates the addictive behavior by more than 8 years (mean): the latter result seems to clearly confirm how traumatic events could lead to addictive behavior, especially when a self-medication mechanism is involved. Explosive Intermittent Disorder was present in 31.4% of the sample and, among these, the 44% presented mental disorder before drug abuse.

Comorbidity with Axis II disorders was highly represented: 85% of the sample presented a personality disorder and over 50% had multiple diagnosis. All subjects with a diagnosis of personality disorder showed the first symptoms approximately 2 years before the beginning of the addictive behavior, with the exception of Adult Antisocial Personality Disorder which, because of its criteria, is diagnosed after the age of 15. The most represented Axis II Disorder in our sample was Borderline Personality Disorder with a percentage of 36,2% of subjects; again, the age of onset of psychiatric symptoms preceded drug abuse with the mean time of 7 months.

The presence of this time window shows how an early detection and treatment of psychiatric symptoms could be essential in the prevention of the occurrence of an Addictive Disorder.

#### **Conclusions**

The aim of our study was to detect, retrospectively, the presence of psychiatric risk factors in our sample of 105 patients with addictive disorder, in order to understand how they could be responsible for addictive behaviour. During adolescence mental disorders are risks factors as frequent as unnoticed or hard to detect, while it should early act upon them in order to avoid self-medication mechanisms and so the outbreak of an addiction <sup>7</sup>.

Our results seems to confirm that it could be present a causality reletionship between psychiatric disorders and drug abuse. In fact over 90% of the sample had comorbidity on Axis I or Axis II, with a clear majority of mood and anxiety disorders (Axis I, DSM IV) and of Cluster B disorders (Axis II DSM IV) respectively. Comorbidity with Axis II disorders was highly represented: 85% of the sample presented a personality disorder and over 50% had multiple diagnosis.

This study suggests that addiction diseases are very often preceded by other psychiatric disorders and that preventive actions are possible during the time window between early psychiatric symptoms and the first contact with substances of abuse. In particular, early detection and efficient treatment of the psychiatric disorder most strongly associated with drug abuse might prevent the outbreak of a full-blown substance-related disorder. Prospective studies are necessary to confirm the direction of causality and evaluate if the two phenomena are directly correlated with a cause-effect relationship.

Table I. Results.

	Frequency (total)	Frequency (previous diagnosis)	Years beetween diagnosis (Mean)	St. Deviation
Axis I	Mayor depression	59 (56.2%)	14	-6,00 (-29;-1)
	Bipolar I	22 (21.0%)	5	-3.45 (-4;-2)
	Bipolar II	7 (6.7%)	3	-2.30 (-3;-1)
	Panic disorder with agoraphobia	23 (21,9%)	6	-5.83 (-11;-1)
	Panic disorder without agoraphobia	8 (7.6%)	2	-9.00 (-15;-3)
	Social phobia	29 (27.6%)	27	-8.96 (-36;-2)
	GAD	35 (33.3%)	21	-6.90 (-33;-1)
	OCD	8 (7.6%)	2	-7.00 (-12;-2)
	Specific phobia	18 (17,1%)	17	-6.76 (-24;-2)
	PTSD	13 (12.4%)	5	-8.40 (-14;-1)
	Schizophrenia	3 (2.9%)	0	/
	Schizoaffective	5 (4.8%)	1	-4.00
	Delusional disorder	4 (3.8%)	2	-7.00 (-11;-3)
	Brief psychotic disorder	3 (2.9%)	0	/
	Nervous anorexia	10 (9.5%)	3	-4.67 (-12;-1)
	Nervous bulimia	6 (5.7%)	0	/
	Intermittent explosive disorder	33 (31.4%)	15	-3.73 (-9;-1)
Axis II	Avoidant P.D.	17 (16.2%)	/*	-3.41
	Dependent P.D.	8 (7.6%)	/*	-1.75
	Obsessive-compulsive P.D.	21 (20%)	/*	-2.10
	Passive-aggressive P.D.	15 (14,3%)	/*	-0.67
	Depressive P.D.	12 (11.4%)	/*	-2.33
	Paranoid P.D.	15 (14.3%)	/*	-0.67
	Schizoid P.D.	9 (8.6%)	/*	-0.89
	Histrionic P.D.	2 (1.9%)	/*	-0.50
	Narcissistic P.D.	5 (4.8%)	/*	-2.60
	Borderine P.D.	50 (47.6%)	/*	-0.66
	Adult Antisocial P.D.	38 (36.2%)	/*	2.22

<sup>\*</sup> The age of onset of Axis II disorders is precocious and usually precedes toxicomanic behaviour, with the exception of Adult Antisocial P. D. which, by criteria, it's diagnosed later in life.

## Take home messages for psychiatric care

- Aim of this study was to investigate a possible temporal and causal connection between psychiatric disorders and addictive behaviour with the goal to prepare the ground for studies on the best prevention strategies
- Our results seems to confirm that it could be present a causality reletionship between psychiatric disorders and drug abuse
- Prospective studies are necessary to confirm the direction of causality and evaluate if the two phenomena are directly correlated with a cause-effect relationship

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#### References

- Rigliano, P. Doppia diagnosi. Tra tossicodipendenza e psicopatologia. Milano: Cortina Raffaello 2004.
- Toumbourou JW, Stockwell T, Neighbors C, et al. Interventions to reduce harm associated with adolescent substance use. Lancet 2007;369:1391-401.
- Winters KC, Fawkes T, Fahnhorst T, et al. A synthesis of exemplary drug abuse prevention programs in the United States. J Subst Abuse Treat 2007;32:371-80.
- <sup>4</sup> Hawkins D, Catalano R, Miller J. Risk and protective factors
- for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. Psychol Bull 1992;112:64-105.
- Cuijpers P. Three decades of drug prevention research. Drugs: Educ Prev Policy 2009:7-20.
- Moss HB, Chen CM, Yi HY. Early adolescent patterns of alcohol, cigarettes, and marijuana polysubstance use and young adult substance use outcomes in a nationally representative sample. Drug Alcohol Depend 2014;136:51-62.
- Cassano GB, Tundo A. Psicopatologia e clinica psichiatrica. Torino: UTET 2008.